

Application No. 10/046,283  
Amendment Dated **January 15, 2004**  
Reply to Office Action of December 5, 2003  
Attorney Docket No. RPL-0026

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

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1. (Currently Amended) A ~~driving method of driving~~ a PDP (Plasma Display Panel) including a pair of substrates ~~arranged at a prescribed interval~~, a plurality of address electrodes formed on one of the substrates and scan electrodes to the number of N formed to intersect the address electrodes, wherein the driving method of driving comprising the steps of comprises:

dividing ~~[[1]]~~ a field of an input video signal into a plurality of sub-fields having brightness ~~weight respectively~~ weights; and

*Az* applying a scan pulse to the scan electrodes to the number of N in order and simultaneously applying an input video data signal pulse to the plurality of address electrodes, in each sub-field, to have an address period designating cells to be displayed and a sustain period applying a sustain pulse to the designated cells according to the brightness weight of the corresponding sub-field,

wherein the plurality of sub-fields include sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of N in order of 1, 2, ..., N-1 and N, and sub-fields, which have the address period applying the scan pulse to the scan electrodes in order of N, N-1, ..., 2 and 1.

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2. (Currently Amended) The ~~driving~~ method according to claim 1, wherein the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of N in order of 1, 2, ..., N-1 and N, are odd ~~number~~ numbered sub-fields and the sub-fields, which have the address period applying the scan pulse to the scan electrodes in order of N, N-1, ..., 2 and 1, are even ~~number~~ numbered sub-fields.

3. (Currently Amended) The ~~driving~~ method according to claim 1, wherein the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of N in order of 1, 2, and N-1 and N, are even ~~number~~ numbered sub-fields and the sub-fields, which have the address period applying the scan pulse to the scan electrodes in order of N, N-1, ... 2 and 1, are odd ~~number~~ numbered sub-fields.

4. (Currently Amended) A ~~driving~~ method of driving a PDP (Plasma Display Panel) including a pair of substrates ~~arranged at a prescribed interval~~, a plurality of address electrodes formed on one of the substrates, the address electrodes being divided into an upper part and a lower part, and scan electrodes to the number of N formed to intersect the address electrodes, wherein the driving method of driving comprising the steps of comprises:

dividing [[1]] a field of an input video signal into a plurality of sub-fields having brightness ~~weight~~ weight ~~respectively~~ weights; and

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applying a scan pulse to the scan electrodes to the number of  $N/2$  intersecting the upper and lower address electrodes in order and simultaneously applying an input video data signal pulse to the upper and lower address electrodes, in each sub-field, to have an address period designating cells to be displayed and a sustain period applying a sustain pulse to the designated cells according to the brightness weight of the corresponding sub-field,

wherein the plurality of sub-fields include sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of  $N/2$  intersecting the upper address electrodes in order of 1, 2, ..., and  $N/2$  and applying the scan pulse to the scan electrodes to the number of  $N/2$  intersecting the lower address electrodes in order of  $(N/2)+1$ , ..., and  $N$ , and sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of  $N/2$  intersecting the upper address electrodes in order of  $N/2$ , ..., 2 and 1 and applying the scan pulse to the scan electrodes to the number of  $N/2$  intersecting the lower address electrodes in order of  $N$ ,  $N-1$ , and  $(N/2) + 1$ .

5. (Currently Amended) The method according to claim 4, wherein the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of  $N/2$  respectively intersecting the upper and lower address electrodes in order of 1, 2, ..., and  $N/2$  and in order of  $(N/2)+1$ , ..., and  $N$ , are odd ~~number~~ numbered sub-fields, and the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the

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number of  $N/2$  intersecting the upper address electrodes in order of  $N/2, \dots, 2$  and  $1$  and in order of  $N, N-1$ , and  $(N/2)+1$ , are even ~~number~~ numbered sub-fields.

6. (Currently Amended) The method according to claim 4, wherein the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of  $N/2$  respectively intersecting the upper and lower address electrodes in order of  $1, 2, \dots$ , and  $N/2$  and in order of  $(N/2)+1, \dots$  and  $N$ , are even ~~number~~ numbered sub-fields, and the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of  $N/2$  intersecting the upper address electrodes in order of  $N/2, \dots, 2$  and  $1$  and in order of  $N, N-1$ , and  $(N/2)+1$ , are odd ~~number~~ numbered sub-fields.

7. (Currently Amended) A ~~driving~~ method of driving a PDP (Plasma Display Panel) including a pair of substrates arranged at a prescribed interval, a plurality of address electrodes formed on one of the substrates, the address electrodes being divided into an upper part and a lower part, and scan electrodes to the number of  $N$  formed to intersect the address electrodes, the ~~driving~~ method of driving comprising the steps of:

dividing ~~[[1]]~~ a field of an input video signal into a plurality of sub-fields having brightness ~~weight~~ weights respectively; and

applying a scan pulse to the scan electrodes to the number of  $N/2$  intersecting the

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upper and lower address electrodes in order and simultaneously applying an input video data signal pulse to the upper and lower address electrodes, in each sub-field, to have an address period designating cells to be displayed and a sustain period applying a sustain pulse to the designated cells according to the brightness weight of the corresponding sub-field,

wherein the plurality of sub-fields include sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of  $N/2$  intersecting the upper address electrodes in order of  $N/2$ ,  $(N/2)-1$ , ... and 1 and applying the scan pulse to the scan electrodes to the number of  $N/2$  intersecting the lower address electrodes in order of  $(N/2)+1$ , ... and  $N$ , and sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of  $N/2$  intersecting the upper address electrodes in order of 1, 2, ... and  $N/2$  and applying the scan pulse to the scan electrodes to the number of  $N/2$  intersecting the lower address electrodes in order of  $N$ ,  $N-1$ , and  $(N/2)+1$ .

8. (Currently Amended) The method according to claim 7, wherein the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of  $N/2$  respectively intersecting the upper and lower address electrodes in order of  $N/2$ ,  $(N/2)-1$ , and 1 and in order of  $(N/2)+1$ , ... and  $N$ , are odd ~~number~~ numbered sub-fields, and the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of  $N/2$  intersecting the upper address electrodes in order of 1, 2, ... and  $N/2$  and in

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order of N, N-1, and  $(N/2)+1$ , are even ~~number~~ numbered sub-fields.

9. (Currently Amended) The method according to claim 7, wherein the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of  $N/2$  respectively intersecting the upper and lower address electrodes in order of  $N/2$ ,  $(N/2)-1$ , and 1 and in order of  $(N/2)+1$ , ... and N, are even ~~number~~ numbered sub-fields, and the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of  $N/2$  intersecting the upper address electrodes in order of 1, 2, and  $N/2$  and in order of N, N-1, and  $(N/2)+1$ , are odd ~~number~~ numbered sub-fields.

*10* 10. (New) A method of driving a PDP (Plasma Display Panel), comprising:

applying a first scan pulse to scan electrodes, wherein each of said scan electrodes are numbered from 1 to N, and wherein said first scan pulse is applied to said scan electrodes in ascending number order from 1 to N; and

applying a second scan pulse to said scan electrodes in descending number order from N to 1.

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11. (New) The method according to claim 10, wherein charged particles generated by said first and second scan pulses are opposed to each other and reduce the amount of excess charged particles residually.

12. (New) The method according to claim 11, wherein said reduction of excess charged particles prevents abnormal discharge or dielectric break down.

13. (New) The method according to claim 10, wherein N is 480.

14. (New) The method according to claim 10, wherein said first scan pulse comprises multiple odd-numbered pulses.

15. (New) The method according to claim 10, wherein said second scan pulse comprises multiple even-numbered pulses.

16. (New) The method according to claim 10, wherein said first scan pulses occur in odd numbered sub-fields of a field.

17. (New) The method according to claim 10, wherein said second scan pulses occur

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in even numbered sub-fields of a field.

18. (New) The method according to claim 10, wherein address electrodes are divided in two and the method further comprises applying said first scan pulse to scan electrodes from 1 to  $N/2$  and from  $N/2$  to  $N$ , and applying said second scan pulse to scan electrodes from  $N/2$  to 1 and from  $N$  to  $N/2$ .

19. (New) The method according to claim 10, wherein address electrodes are divided in two and the method further comprises applying said first scan pulse to scan electrodes from 1 to  $N/2$  and from  $N$  to  $N/2$ , and applying said second scan pulse to scan electrodes from  $N/2$  to 1 and  $N/2$  to  $N$ .

20. (New) The method according to claim 10, wherein said applying first scan pulse to said scan electrodes in ascending order from 1 to  $N$  occurs in 16.67 msec.

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